

### ***Remarks***

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-4, 6 and 7 are pending in the application, with claim 1 being the independent claim. Claims 1 and 2 are amended to correct typographic errors and is believed to introduce no new matter, and its entry is respectfully requested.

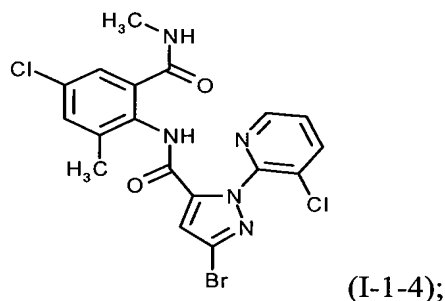
Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objection and rejection and that they be withdrawn.

#### ***I. Election of Species***

The Examiner has corrected the basis for the restriction requirement for lack of unity. Applicants affirm the election of species as filed on April 24, 2008.

Specifically, Applicants elect to prosecute the following composition represented by claims 1-4, 6 and 7:

(a) A compound of formula (I), represented by the compound I-1-4, and having the following structure:



(b) An insecticidally active compound of group 2, chlorpyrifos; and

(c) An insecticidally active compound of group 3, methiocarb.

Claims 1-4, 6 and 7 encompass the elected invention.

## **II. Objection to Claim 1**

Claim 1 was objected by the Examiner due to a typographic error. In view of the amendment to claim 1, the objection is rendered moot.

## **III. Rejections under 35 U.S.C. § 103(a)**

Claims 1-4, 6 and 7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Lahm *et al.* (WO 03/015519 A1) ("Lahm") in view of Brück *et al.* (U. S. Patent No. 6,576,661) ("Brück"), as evidenced by EXTOKNET and Merriam-Webster's Medical Dictionary (collectively "EXTOKNET"). Applicants respectfully traverse the rejection.

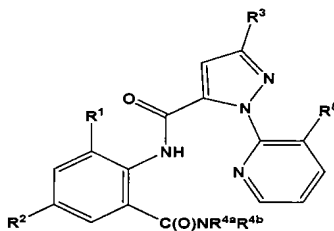
### **A. Description of the Invention**

The present invention claims a synergistically effective combination of a compound of formula (I), represented by the compound I-1-4, an insecticidal compound of group 2, represented by chlorpyrifos and/or an insecticidal compound of group 3, represented by methiocarb.

### **B. References Cited by the Examiner**

#### **1. Lahm**

Lahm is directed to a very broad genus of compounds of Formula 1 as shown below:



wherein R<sup>1</sup> is CH<sub>3</sub>, F, Cl or Br, . . . .

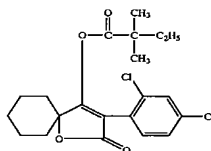
(Lahm, page 2.)

Thus, Lahm's general Formula 1 encompasses hundreds of thousands of compounds. Lahm also discloses 810 specific compounds of Formula 1. (Lahm, Table 1 at pages 37-48 and Index Table A at pages 63-67.) One of the 810 compounds is Applicants' elected compound I-1-4. (Lahm, Table 1 at page 38 and Index Table A at page 63.)

In addition, Lahm discloses that the compounds of Formula 1 can be used for pest control. (Lahm, pages 54-59.) Lahm also generally discloses that the compounds of Formula 1 can be mixed with one or more other biologically active compounds or agents, such as insecticides, fungicides, nematocides, bactericides, acaricides, growth regulators, etc. Lahm mentions hundreds of such insecticides, fungicides, nematocides, bactericides and acaricides. Exemplary insecticides include chlorpyrifos, methomyl and oxamyl. (Lahm, pages 59-60.) Lahm further discloses preferred insecticides and acaricides for combining with compounds of Formula 1. The preferred insecticides disclosed therein do not include chlorpyrifos. (Lahm, pages 60-61.)

## **2. Brück**

Brück discloses a combination of a cyclic ketonol compound, as shown below, and one or more of (a) (thio)phosphates, (b) pyrethroids, (c) carbamates, (d) benzoylureas, (e) macrolids, (f) diacylhydrazines, (g) halogenocycloalkanes, (h) acaricides, or (i) other compounds. Chlorpyrifos is disclosed as an example of (thio)phosphates. Methiocarb, methomyl and oxamyl are disclosed as examples of carbamates. (Brück, cols. 1-22.)



Brück also discloses that the preferred mixing ratio for the cyclic ketonol compound and chlorpyrifos or methiocarb is 10:1 to 1:10, especially 5:1 to 1:5. (Brück, col. 23, lines 13 and 43.)

### 3. *EXTOXNET*

EXTOXNET discloses that certain pesticides work against undesirable bugs by interfering with, or 'inhibiting' cholinesterase. The two main classes of cholinesterase inhibiting pesticides are organophosphates and carbamates. EXTOXNET also discloses that carbamates include methiocarb, methomy and oxamyl. (EXTOXNET, pages 1-3.)

#### C. *Prima Facie Case of Obviousness Has Not Been Established*

"The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious." MPEP 2143. Applicants respectfully submit that the Examiner has not established a *prima facie* case of obviousness.

#### 1. *Claims 1-3, 6 and 7 Are Not Prima Facie Obvious*

Each of claims 1-3, 6 and 7 requires a synergistically effective combination of an anthranilamide compound, *e.g.*, the compound I-1-4 and chlorpyrifos and/or methiocarb.

##### a. *Synergistic combination of the compound I-1-4 and chlorpyrifos*

As discussed above, Lahm generally discloses a very broad genus of anthranilamide compounds of Formula 1. Lahm also discloses 810 compounds that are

encompassed by Formula 1. One of such compounds is Applicants' elected compound, *i.e.*, the compound I-1-4. Lahm then generally discloses that the anthranilamide compounds of Formula 1 can be combined with one or more other biologically active compounds or agents. Such biologically active compounds or agents encompass hundreds of thousands of insecticides, fungicides, nematocides, bactericides, acaricides, growth regulators, etc. The insecticides include chlorpyrifos. However, according to Lahm, chlorpyrifos is **not** a referred insecticide to be combined with the anthranilamide compounds of Formula 1.

Thus, Lahm discloses an infinite number of possible combinations of the anthranilamide compounds of Formula 1 and one or more other biologically active compounds or agents. Even though Lahm specifically discloses the compound I-1-4, Lahm does not specifically disclose combining the compound I-1-4 with one or more other biologically active compounds or agents, much less combining the compound I-1-4 with chlorpyrifos.

The Examiner has not articulated a particular reason why a person of ordinary skill in the art reading Lahm would select the compound I-1-4 from 810 anthranilamide compounds disclosed therein, and combine it with other biologically active compounds or agents. Particularly, the Examiner has not articulated a particular reason why a person of ordinary skill in the art would combine the compound I-1-4 with chlorpyrifos, especially in light of Lahm's teaching that chlorpyrifos is not a preferred combination partner for the anthranilamide compounds of Formula 1.

Furthermore, as acknowledged by the Examiner, Lahm does not disclose or teach combining the compound I-1-4 with chlorpyrifos to achieve a synergistic effect.

However, according to the Examiner, the combinational compositions disclosed in Lahm would "inherently" exhibit synergistic effects. Applicants respectfully traverse.

"The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic." MPEP 2112 (citing *In re Rijckaert*, 9 F.3d 1531, 1534 (Fed. Cir. 1993)).

As discussed above, Lahm merely discloses that an anthranilamide compound of Formula 1 may be combined with one or more other biologically active compounds or agents. There are no descriptions or examples in Lahm actually exemplify that an anthranilamide compound of Formula 1 is combined with one or more other biologically active compounds or agents, and the biological results or characteristics of such combination. Specifically, Lahm does not disclose or teach the mixing ratios of an anthranilamide compound of Formula 1 and other biologically active compounds or agents. Thus, at most, Lahm discloses a combination of an anthranilamide compound of Formula 1 and one or more other biologically active compounds or agents that **may be** synergistic. "Inherency, however, may not be established by probabilities or possibilities." MPEP 2112. Thus, the Examiner has not provided any evidence that the combinational compositions generally mentioned in Lahm "inherently" present the synergistic effect as recited in claims 1-3, 6 and 7 of the present application.

Also, as discussed above, Brück is directed to a combination of a cyclic ketonol compound and chlorpyrifos. The cyclic ketonol compound is a completely different class of insecticidal compound than Applicants' anthranilamide compound, *e.g.*, the compound I-1-4. Nothing in the cited references indicates that the cyclic ketonol compound of Brück is equivalent to the compound I-1-4 with respect to forming a synergistically combination with chlorpyrifos.

In sum, there is nothing in any of the cited references that would provide a reason for making a synergistically effective combination of the compound I-1-4 and chlorpyrifos. Accordingly, for at least these reasons, the synergistic combination of the compound I-1-4 and chlorpyrifos recited in Applicants' claims 1-3, 6 and 7 are not *prima facie* obvious over Lahm in view of Brück, as evidenced by EXTOUNET.

***b. Synergistic combination of the compound I-1-4 and methiocarb***

As discussed above, Lahm generally discloses that the anthranilamide compounds of Formula 1 can be combined with one or more other biologically active compounds or agents. Such biologically active compounds or agents encompass hundreds of thousands of insecticides, fungicides, nematocides, bactericides, acaricides, growth regulators, etc. The insecticides include methomyl and oxamyl. As acknowledged by the Examiner, Lahm does **not** disclose methiocarb as an insecticide for combination. However, according to the Examiner, it would be obvious to substitute methomyl or oxamyl as disclosed in Lahm with methiocarb because these compounds belong to a class of cholinesterase inhibiting pesticides, *i.e.*, carbamates, as evidenced by EXTOUNET. Applicants respectfully traverse.

First, for the same reasons stated above, Lahm discloses an infinite number of possible combinations of the anthranilamide compounds of Formula 1 and one or more other biologically active compounds or agents. Even though Lahm specifically discloses the compound I-1-4, Lahm does not specifically disclose combining the compound I-1-4 with one or more other biologically active compounds or agents, much less combining with methomyl or oxamyl.

Second, as acknowledged by the Examiner, Lahm does not disclose or teach combining the compound I-1-4 with methomyl and oxamyl to achieve a synergistic effect. For the same reasons stated above, the Examiner has not provided any evidence that the combinational compositions generally mentioned in Lahm "inherently" present the synergistic effect as recited in claims 1-3, 6 and 7 of the present application, because Lahm, at most, discloses a combination of an anthranilamide compound of Formula 1 and one or more other biologically active compounds or agents that may be synergistic.

Third, even assuming that a person of ordinary skill in the art would combine the compound I-1-4 with methomyl or oxamyl in view of Lahm, the Examiner has not articulated a particular reason why a person of ordinary skill in the art would substitute methomyl or oxamyl with methiocarb.

The Examiner took the position that methomy or oxamyl is equivalent to or interchangeable with methiocarb because they belong to the same class of cholinesterase inhibiting pesticides, *i.e.*, carbamates. However, the Examiner did not provide any evidence that methomy or oxamyl is equivalent to or interchangeable with methiocarb, or that methomy or oxamyl would have been expected to achieve a synergistic effect where they are combined with the compound I-1-4.

Also, as discussed above, Brück discloses a combination of a cyclic ketonol compound and methomyl, oxamyl or methiocarb. At most, Brück only teaches the equivalency of methiocarb with methomy or oxamyl where the other active agent is the cyclic ketonol compound. Nothing in the cited references indicates that methiocarb would have an equivalent or better synergistic herbicidal effect than methomy or oxamyl where they are combined with the compound I-1-4.



In sum, there is nothing in any of the cited references that would provide a reason for making a combination of the compound I-1-4 and methiocarb, or that the combination would provide synergistic effective. Accordingly, for at least these reasons, claims 1-3, 6 and 7 are not *prima facie* obvious over Lahm in view of Brück, as evidenced by EXTTOXNET.

**2. Claim 4 Is Not Prima Facie Obvious**

Claim 4 depends from claim 1, and further requires that the ratio for the compound I-1-4 and chlorpyrifos, or the compound I-1-4 and methiocarb is from 50:1 to 1:50.

For the same reasons stated above for claim 1, claim 4 is not *prima facie* obvious over Lahm and in view of Brück, as evidenced by EXTTOXNET.

In addition, as discussed above, Lahm does not disclose a synergistically effective combination of the compound I-1-4 and chlorpyrifos, or a synergistically effective combination of the compound I-1-4 and methiocarb, much less the synergistic mixing ratios for the compound I-1-4 and chlorpyrifos or the compound I-1-4 and methiocarb as recited in claim 4.

According to the Examiner, Brück discloses a combination of a cyclic ketonol compound and chlorpyrifos or methiocarb, at a ratio of 10:1 to 1:10 and 5:1 to 1:5. The Examiner stated that these ratios fall within the ratio of claim 4, thus renders claim 4 obvious. Applicants respectfully traverse.

As discussed above, Brück is directed to a combination of a cyclic ketonol compound and chlorpyrifos or methiocarb. The cyclic ketonol compound is a completely different class of insecticidal compound than the compound I-1-4. Nothing in the cited references indicates that the cyclic ketonol compound of Brück is equivalent

to the compound I-1-4 with respect to forming a synergistically combination with chlorpyrifos or methiocarb. Particularly, nothing in the cited references indicates that the cyclic ketonol compound is equivalent to the compound I-1-4 with respect to achieving a synergistic effective within the disclosed mixing ratios of Brück. To the contrary, Brück teaches that synergic effect is achieved at certain ratios for a particular combination. (Brück, cols. 22-23.) Thus, the Examiner has not articulated a particular reason why a person of ordinary skill in the art would substitute the cyclic ketonol compound in the combinations disclosed in Brück with the compound I-1-4 to arrive at Applicants' invention. Accordingly, for this additional reason, claim 4 is not *prima facie* obvious over Lahm in view of Brück, as evidenced by EXTOKNET.

### ***Conclusion***

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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